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10/538,564	06/15/2005	Alan J. Davie	GB020244	9461

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EXAMINER
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JIANG, YONG HANG

ART UNIT	PAPER NUMBER
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2609

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06/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/538,564

Applicant(s)

DAVIE ET AL.

Examiner

Yong Hang Jiang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/15/2005.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 12-18 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 12 does not further limit the parent claim, which is claim 1; claim 12 merely recites a limitation that is already in the parent claim.

Claims 13-18 depend on claim 12; therefore they suffer the same deficiency.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, the phrase "receiver coupled to a database" in the claim rendered the claim indefinite. A database is a comprehensive collection of related data organized for convenient access, generally in a computer. A receiver is a device, not a computer; it may be coupled to a computer with a database, not coupled to a database directly.

### ***Claim Rejections - 35 USC § 102***

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 11-12, and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Woolley et al. (5,892,441).

Regarding claim 1, Woolley discloses a system comprising: a first base station via (a workstation in operations center 13) for determining a location of an object based upon an object-related signal; an object-attachable tag via (asset tag 16) and a portable transceiver via (monitoring device 15), comprising: a receiver arrangement via (receiver 300) for receiving a signal from the tag; a signal processor via (communications controller 272) for converting the signal into the object-related signal; and a transmitter arrangement via (transmitter 302) for sending the object-related signal to the first base station. (See Col. 16, lines 17-20; 17, lines 3-9; 25, lines 16-23; 26, lines 23-33; and Figure 1).

Regarding claim 2, Woolley discloses the first base station (workstation) comprising an inherent receiver (for communicating with monitoring device 15) coupled to a computer with a database via (workstation having database software to be used on a database). (See 28, lines 33-45).

Regarding claim 11, Woolley discloses the base station (workstation linked to monitoring device 15, monitoring device used to locate items with tags) being arranged

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to track a location of an object responsive to an object-related signal from a portable transceiver. (See Col. 16, lines 17-20 and Col. 17, lines 3-9).

Regarding claim 12, Woolley discloses a portable transceiver via (monitoring device 15), comprising: a receiver arrangement via (receiver 300) for receiving a signal from the tag; a signal processor via (communications controller 272) for converting the signal into the object-related signal; and a transmitter arrangement via (transmitter 302) for sending the object-related signal to the first base station. (See Col. 25, lines 17-23 and Col. 26, lines 23-33).

Regarding claim 17, Woolley discloses the portable transceiver being integrated in a wearable item via (monitoring device 15 includes a personal digital assistant 270). (See Col. 25, lines 17-23)

Regarding claim 18, Woolley discloses a portable transceiver comprising a data storage for storing the position of the object via (PDA with inherent memory for storage). (See Col. 25 lines 24-30).

6. Claims 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by McDonald (2001/0040513)

Regarding claim 19, McDonald discloses a method of positioning a location of an object, the method comprising the steps of: sending a signal from a tag to a portable transceiver via (receiver 404 in tag reader 102 receives response signals from tags); converting the signal to an object-related signal via (processor 406 processing response signals); sending the object-related signal to a base station via (tag-reader 102 sends information signal to network 117); determining the position of the portable transceiver

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sending the object-related signal via (determining what area the portable transceiver is in) and associating the position of the object with the determined position of the portable transceiver. (See the Abstract and paragraph 36).

Regarding claim 20. McDonald discloses sending a first part of the object-related signal upon establishing a communication with the tag via (tag-reader 102 sends tag identification code to network 117); and sending a second part of the object related signal upon terminating the communication with the tag via (tag-reader 102 sends tag reader identification code to network 117).

Regarding claim 21. McDonald discloses the step of sending a signal from a tag to a portable transceiver is preceded by activating the tag with an activation signal from the portable transceiver via (transmitter 408 transmits an interrogation signal to tag 119 for activation).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woolley as applied to claim 1 and 12 above, and further in view of Struble et al. (6,433,685).

Regarding claims 3 and 13, Woolley discloses the structural elements of the claimed invention but fails to disclose the use of a transceiver identification code in an object related signal.

Struble teaches the use of transmitting identification codes from a transceiver to a detector when the detector requests for identification of an article the transceiver is attached to. (See Col. 1 lines 35-46 and Col. 2 lines 11-27).

From the teachings of Struble, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the portable transceiver of Woolley to include the use of an identification code in the signal transmitted to the first base station in order to distinguish the transceiver transmitting the signal from other transceivers, thereby identifying the transceiver.

10. Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woolley as applied to claim 1 and 12 above, and further in view of Yasushi (5,495,853).

Regarding claims 4 and 14, Woolley discloses the structural elements of the claimed invention but fails to disclose the use of an amplifier to amplify the signals received by the signal processor.

Yasushi teaches a signal processor (3) comprising a low-noise high gain signal amplifier (7) to amplify signals received. (See Col. 4, lines 3-10).

From the teachings of Yasushi, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the processor disclosed by Woolley to include an amplifier to achieve better signal to noise ratio, thereby reducing errors generated by noise.

11. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woolley as applied to claim 1 and 12 above, and further in view of Lee (RFID Tag Reader Uses FSK To Avoid Collisions, Electronic Design, October 28, 1999).

Regarding claims 5 and 15, Woolley discloses the structural elements of the claimed invention but fails to disclose the use of signal transmission collision-avoidance mechanism on the portable transceiver.

Lee teaches the use of a signal transmission collision-avoidance mechanism on a portable transceiver (RFID reader); the mechanism works by using a "gap pulse" when the portable transceiver is interrogating multiple tags, when an RFID tag recognizes the gap pulse, it doesn't transmit data until it counts a number that's generated by a random number counter. Each tag will finish counting the number in a different time.

From the teachings of Lee, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the portable transceiver disclosed by Woolley to include a signal transmission collision-avoidance mechanism on the



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portable transceiver to read object-attachable tags without data corruption caused by collisions, thereby improving the performance of interrogation on object-attachable tags.

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woolley.

Regarding claim 6, Woolley discloses the structural elements of the claimed invention but fails to disclose a further portable transceiver.

However, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the system of Woolley to include a further portable transceiver (monitoring device 15) to increase the number of available portable transceivers to provide easier monitoring and tracking of object-attachable tags when there is more than one person tracking, thereby increasing the efficiency of workers when they are tracking articles with object-attachable tags attached.

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woolley as applied to claim 6 above, and further in view of Shawhan (3,930,220).

Woolley discloses the structural elements of the claimed invention but fails to disclose transmitting of signals using different frequencies.

Shawhan teaches the concept of avoiding signal interference between multiple transmitters by shifting the carrier frequency of the transmitters. (See the Abstract).

From the teachings of Shawhan, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the portable transceivers to transmit in different carrier frequencies in order to avoid interference between transmissions, thereby reduces undesired signal loss.

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14. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woolley as applied to claim 6 above, and further in view of Lee (RFID Tag Reader Uses FSK To Avoid Collisions, Electronic Design, October 28, 1999).

Regarding claim 6, Woolley discloses the structural elements of the claimed invention but fails to disclose the use of synchronized delay to avoid signal interference.

Lee teaches the use of a signal transmission collision-avoidance mechanism to avoid signal interference by letting object RFID tags transmit at different time slots.

From the teachings of Lee, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the transmitters disclosed by Woolley to transmit at multiple time delays to avoid signal interference, thereby reducing signal loss.

15. Claims 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woolley as applied to claim 1 and 12.

Regarding claims 9 and 16, Woolley discloses the structural elements of the claimed invention but fails to disclose a further transmitter arrangement for providing the tag with the activation signal.

However, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the portable transceiver disclosed Woolley to include a further transmitter arrangement to transmit an activation signal to the object-attachable tag to improve the signal transmitted by the portable transceiver due to a dedicated transmitter arrangement, thereby increases the successful rate of a object-attachable tag activation.

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16. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woolley as applied to claim 1 above, and further in view of McDonald (US 2001/0040513).

Regarding claim 10, Woolley discloses the structural elements of the claimed invention but fails to disclose the use of triangulation measurement utilizing three base stations to locate an object-attachable tag.

McDonald teaches the concept of locating an article using a plurality of receivers and determining the location of the article by using triangulation techniques on the receivers. (See paragraph 68)

From the teachings of McDonald, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the system disclosed by Woolley include the use of multiple base stations to utilize triangulation techniques to locate an article, thereby making location of articles with object-attachable tags more accurate.

### ***Conclusion***

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong Hang Jiang whose telephone number is 571-270-3024. The examiner can normally be reached on M-F 7:30 am to 5:30 pm alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynda Jasmin can be reached on 571-270-3033. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

YHJ



**BENNY TIEU**  
**PRIMARY EXAMINER**